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Winter 2010

## CEG 435/635-01: Distributed Computing and Systems

Keke Chen

*Wright State University - Main Campus, keke.chen@wright.edu*

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# CEG 435/635

## Distributed Computing and Systems

### Syllabus

Winter Quarter, 2010

<b>Time/Place:</b>	Lecture: 10:25 – 11:40 AM, Tu. & Th., Joshi 193
<b>Instructor:</b>	Dr. Keke Chen, Joshi 385 Tel. 937-775-4642, Email: keke.chen@wright.edu Office Hours: 2:00-4:00 pm, Thursday
<b>Prerequisite:</b>	CEG 433 or equivalent. Expected background: operating system, algorithms, C/C++ programming experience in UNIX or Linux.
<b>Course Description:</b>	Study of process coordination, client-server computing, network and distributed operating systems, network and distributed file systems, concurrency control, recovery of distributed transactions, and fault-tolerant computing.
<b>Text Books:</b>	<i>Required:</i> Coulouris, G., Dollimore, J., and Kindberg, T. , Distributed Systems: Concepts and Design, 4th Edition, Addison Wesley, 2005 <i>References:</i> Tanenbaum, A. and Maarten van Steen, Distributed Systems Principles and Paradigms, 2002: Prentice-Hall, ISBN 0-13-088893-1.
<b>Website:</b>	CEG435-635 in WebCT.
<b>Grading:</b>	Project assignment – 30 % Homework – 15% Midterm Exam – 25% Final – 30%  A[100,90], B[89,80],C[79,70],D[69,60] F [59,0] The instructor reserves the right to curve the grades according to the grade distribution.

## Lectures:

The following is a tentative schedule.

Week	Reading	Contents
1	Chapter 1 Chapter 2	Welcome and introduction Models of distributed Systems
2	Chapter 4 +papers	IPC Group communication
3	Chapter 5	Remote procedure call Distributed objects and consistency
4	Chapter 13	Transaction processing Concurrency control
5	Chapter 14	Distributed transactions <b>Midterm Exam</b>
6	Chapter 11, 12	Event ordering, global states, and time Coordination and agreement
7	Chapter 7 + papers	Distributed file systems Hadoop
8	Chapter 9, 10 + papers	Naming, resource finding, peer-to-peer systems, and publish/subscribe systems
9	Chapter 15 +papers	Failures, fault tolerant services and data replication
10	papers	Data intensive systems Cloud computing
11		<b>FINAL</b>